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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,396	03/04/2005	Philipp Stossel	14113-00044-US	7637

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EXAMINER	
WILSON, MICHAEL H	

ART UNIT	PAPER NUMBER
1786	

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06/23/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,396	STOSSEL ET AL.	
	Examiner	Art Unit	
	MICHAEL WILSON	1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8-18 and 22-26* is/are pending in the application.

4a) Of the above claim(s) *2,3,11,13,14,16-18 and 22-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,5,8-10,12 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is in response to Applicant's amendment filed 23 March 2010, which amends claims 1 and 9.

Claims 1-5, 8-18, and 22-26 are pending.

2. Applicants overcame the rejection of claims 1, 4, 5, 8, and 12 under 35 U.S.C. 102(b) as being anticipated by Kamatani et al. (WO 02/45466 A1), US 2003/0059646 A1 is relied upon as the English language translation by amending the claims in the reply filed 23 March 2010.

3. Applicants overcame the rejection of claims 1, 4, 5, 8-10, and 12 under 35 U.S.C. 102(b) as being anticipated by Kamatani et al. (WO 02/44189 A1) by amending the claims in the reply filed 23 March 2010.

4. Applicants overcame the rejection of claims 1, 4, 5, 8-10, and 12 under 35 U.S.C. 102(b) as being anticipated by Burn et al. (WO 02/066552 A1) by amending the claims in the reply filed 23 March 2010.

5. Applicants overcame the rejection of claims 1, 4, 5, 8-10, 12, and 15 under 35 U.S.C. 103(a) as being unpatentable over Igarashi et al. (US 2001/0019782 A1) because of Applicant's persuasive argument in the reply filed 23 March 2010.

6. Applicants overcame the rejections of claim 15 under 35 U.S.C. 103(a) as being unpatentable over Kamatani et al. (WO 02/45466 A1), Kamatani et al. (WO 02/44189

A1), and Burn et al. (WO 02/066552 A1) by amending the claims in the reply filed 23 March 2010.

7. The elected species (Formula (I) Y = R-C=C-R and Ar = phenyl) is allowable. In accordance with MPEP 803.02 the examiner has expanded to search to include nonelected species. The Examiner expanded to search to include nonelected species of formula (I) where Y = R-C=C-R or R-C=N and the full scope of Ar as well as nonelected species of formula (II) where Y = R-C=C-R or R-C=N, X is S, and the full scope of Ar. However, it was unnecessary to extend the prior art search to cover all nonelected species. Withdrawn species of formulae (I) and (II) wherein Y = O or S remain withdrawn.

8. Claims 2, 3, 11, and 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 26 March, 2008.

9. Claims 14, 16-18, and 22-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in the reply filed on 26 March, 2008.

Claim Objections

10. Claim 1 is objected to because of the following informalities:

In Claim 1 the definition of Ar lists N-alkylcarbazole twice.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 4, 5, 8-10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuboyama et al. (US 2003/0068536 A1).

Regarding claim 1,4, 5, 8-10, and 12, Tsuboyama et al. disclose the compound of formula (II) wherein M is Ir, Y is R-C=C-R, X is S and Ar is phenyl, naphthyl, or thiophene (page 9 table 7, compounds 353-356, page 10, table 9, compounds385 and 387, and page 12, table 17, compound 524).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboyama et al. (US 2003/0068536 A1) as applied to claim 1 above.

Regarding claim 15, Tsuboyama et al. discloses all the claim limitations as set forth above. While the reference does not explicitly disclose the purity of the compounds, it would be obvious to one of ordinary skill in the art at the time of the invention to purify the compounds of Tsuboyama et al. using methods well known in the art to obtain a purity of 99%. Since the instant specification is silent to unexpected results, purity is not considered to confer patentability to the claims. As the product properties are variable(s) that can be modified, among others, by product purity, the precise purity would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the purity of the compound cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would

have optimized, by routine experimentation, the purity of the compounds in the device of Tsuboyama et al. to remove undesired impurity emission and obtain desired product properties (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Response to Arguments

16. Applicant's argument filed 23 March 2010 regarding unexpected results in relation to Igarashi et al. is persuasive. Applicants argued that Igarashi et al. could only support a *prima facie* case of obviousness when Ar is phenyl given the broad disclosure and lack of guidance in the use of condensed aryl or heteroaryl groups. Applicant's showing of unexpected results when Ar is phenyl is commensurate in light of this.

17. The Declarations under 37 CFR 1.131 filed 18 August 2008 and 24 March 2009 are insufficient to overcome the rejection of Tsuboyama et al. (US 2003/0068536 A1) as set forth above. While the declarations establish prior invention of certain embodiments of instant formula (I) they do not establish prior invention of embodiments of instant formula (II) because thiophene is not considered an obvious variant of phenyl.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL WILSON whose telephone number is (571) 270-3882. The examiner can normally be reached on Monday-Thursday, 7:30-5:00PM EST, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MHW

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1787